

TOTALVIEW PLATFORMS AND SYSTEM REQUIREMENTS



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VERSION 6.6

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Contents

Computer and Operating System Requirements

HP Alpha Tru64 UNIX	2
HP HP-UX for PA-RISC	3
HP HP-UX for IA-64	4
IBM RS/6000 Power AIX	4
Myrinet Support	5
SGI IRIX 6.x MIPS	5
Sun SPARC Solaris	6
Linux Support	7
32-bit x86 Linux	7
x86-64 Linux	9
HP Alpha Linux Red Hat	9
IBM Power Linux	10
Other Linux x86 Computers	11
Intel IA-64 Linux	11

Computer and Operating System Requirements

To run TotalView® on your system, you must have the correct hardware configuration and the correct software installed.

The following table shows the supported computers and operating system and the TotalView version supporting each.

Computer and Operating System	TotalView Version
"HP Alpha Tru64 UNIX" on page 2	6.6
"HP HP-UX for PA-RISC" on page 3	5.0.0-5
"HP HP-UX for IA-64" on page 4	6.6
"IBM RS/6000 Power AIX" on page 4	6.6
"SGI IRIX 6.x MIPS" on page 5	6.6
"Sun SPARC Solaris" on page 6	6.6
"32-bit x86 Linux" on page 7	6.6
"x86-64 Linux" on page 9	6.6
"HP Alpha Linux Red Hat" on page 9	6.2.0-3
"IBM Power Linux" on page 10	6.6
"Intel IA-64 Linux" on page 11	6.6

You may also want to read the *TotalView Release Notes* which describes problems that have been fixed or still exist.

When you install TotalView, you will also need to install the FLEXlm license manager. Here are the computers upon which it runs and the minimum operating system version for each.

Platform	Operating System Version
AMD x86-64 Linux	SLES 8
HP Alpha Tru64 UNIX	4.0F
IBM RS/6000 Power AIX	5.1
Intel IA-64 Linux	Red Hat Linux 7.2
Intel x86/AMD Athalon	Red Hat Linux 7.2
SGI IRIX MIPS	6.5.15f
Sun SPARC Solaris	7.0

HP Alpha Tru64 UNIX

Software Requirements

HP Alpha Tru64 UNIX versions V4.0F, V5.1, V5.1A, and V5.1B; many versions require patches.

Hardware Requirements

- Any Alpha processor-based computer
- 86 MB of disk space
- 64 MB of physical memory and 100 MB of swap space (for each Total-View session, and for each 100,000-line program)

Additional Requirements

Here are the compilers and environments supported by version 6.6 on a HP Alpha Tru64 UNIX system. If STLView is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	GCC 3.3.3 and 3.4.1 HP C for Tru64 V6.4 and V6.5
C++	HP Alpha Tru64 UNIX C++ V6.3 and V6.5 GCC 3.3.3 and 3.4.1
FORTRAN 77	HP Alpha Tru64 UNIX V5.4 and V5.5A GCC 3.3.3 and 3.4.1
Fortran 90	HP Alpha Tru64 UNIX V5.4 and V5.5A
MPI	HP Alpha MPI (DMPI), versions 1.9, 1.96—1.95 is <i>not</i> supported MPICH, versions 1.2.4, 1.2.5, and 1.2.6 QSW RMS2, Running on AlphaServer using SC V2.0 and V2.5
OpenMP C	HP Alpha Tru64 UNIX C++ V6.4
OpenMP C++	HP Alpha Tru64 UNIX C++ V6.3, and V6.5
OpenMP Fortran	HP Alpha Tru64 UNIX V5.4 and V5.5A
PVM	ORNL PVM, version 3.4.4 Note: PVM support may be withdrawn in a future release.
UPC	Version 2.0 and 2.1 for Tru64 UNIX

Restrictions

- The Stack parent token is broken in HP Alpha Fortran V5.4.
- For additional information, see **HP Alpha Tru64 UNIX Problems** within the *TotalView Release Notes*.

HP HP-UX for PA-RISC

The software and hardware requirements for running TotalView 5.0.0-5 on HP HP-UX systems are as follows:

Software Requirements

HP-UX versions 11.00, 11.10, and 11i

Hardware Requirements

- Any PA-RISC 1.1 or 2.0 processor-based computer
- 77MB of disk space
- 64MB of physical memory and 100MB of swap space for each TotalView session and for each 100,000-line program

Additional Requirements

Here are the compilers and environments supported by TotalView 5.0.0-5 on a HP-UX system:

Compiler or Environment	Product
C	HP ANSI C compiler, version A.11.00.15 and A.11.01.00
C++	HP C++ compiler, version A.03.13, A.03.15, A.03.33, and A.03.39 KAI 3.4
Fortran 90	HP Fortran 90, version 2.2
MPI	HP MPI, versions 1.6, 1.7, and 1.8
OpenMP C++	KAI Guide 3.8 and 3.9
OpenMP Fortran	KAI Guide 3.8 and 3.9
PVM	ORNL PVM, version 3.4.1 Note: PVM support may be withdrawn in a future release.

Restrictions

For additional information, see HP HP-UX Problems within the *TotalView Release Notes*.

HP HP-UX for IA-64

Software and hardware requirements for running Version 6.6 on HP-UX and IA-64 Linux systems are as follows:

Software Requirements

- HP-UX, version 11, version 2.0 (11.23)

Hardware Requirements

- Itanium or Itanium 2 processor (IPF)

Additional Requirements

Here are the compilers and environments supported for TotalView version 6.6. If STLView is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	HP C, version A.05.50 GCC 3.3.3 and 3.4.1
C++	HP acc A.05.50 GCC 3.3.3 and 3.4.1
Fortran 77	HP Fortran, version 2.7 GCC 3.3.3 and 3.4.1
Fortran 90	HP Fortran 90, version 2.7
MPI	HP MPI, versions 1.8

IBM RS/6000 Power AIX

The software and hardware requirements for running version 6.6 on RS/6000 Power AIX systems are as follows:

Software Requirements

AIX version 5.1L or 5.2L (see RESTRICTIONS below)

Hardware Requirements

- Any RS/6000 or RS/6000SP
- 83 MB of disk space
- 32 MB of physical memory and 50 MB of swap space (per TotalView session, per 100,000-line program)

Additional Requirements

Here are the compilers and environments supported by version 6.6 on a IBM RS/6000 Power AIX system. If STLView is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	GCC 3.3.3 and 3.4.1 VisualAge 5.0.2.0, 6.0.0.0, and 7.0.0.0
C++	GCC 3.3.3 and 3.4.1 VisualAge 5.0.2.0, 6.0.0.0, and 7.0.0.0
FORTTRAN 77	IBM xlf 7.1.1.4, 8.1.0.3, 8.1.1.0, and 9.1.0.0 GCC 3.3.3 and 3.4.1

Compiler or Environment	Product
Fortran 90	IBM xlf90 7.1.1.4, 8.1.0.3, 8.1.1.0, and 9.1.0.0
MPI	MPICH, version 1.2.4, 1.2.5, and 1.2.6 PE for AIX 3.1, 3.2, and 4.1.0.4 See <i>Restrictions</i> below
OpenMP C	Visual Age C 5.0.2.0, 6.0.0.0, and 7.0.0.0
OpenMP C++	Visual Age C 5.0.2.0, 6.0.0.0 and 7.0.0.0
OpenMP Fortran	IBM xlf 7.1.1.4, 8.1.0.3, 8.1.1.1, and 9.1.0.0
PVM	ORNL PVM, version 3.4.4 Note: PVM support may be withdrawn in a future release.

Restrictions

- IBM PVME is not supported.
- To use the Message Queue Display (MOD) feature of TotalView with applications using IBM MPI Parallel Environment (PE), you must have the PE version 3.2 or 4.1, and you must be using the threaded version of the MPI library.
- version 6.6 will not work with versions of GPF earlier than version 1.3 due to limitations in that file system. No file that must be read by should be stored on a pre-version 1.3 GPFS system.
- For additional information, see **RS/6000 Problems** within the *TotalView Release Notes*.

Myrinet Support

Version 1.1.3 of the Myrinet GM software supports TotalView. (GM is a message-passing system for Myrinet networks. The GM system includes a driver, Myrinet-interface control program, a network mapping program, and the GM API, library, and header files.) You can obtain this software from <http://www.myrinet.com/scs/index.html>.

SGI IRIX 6.x MIPS

The software and hardware requirements for running version 6.6 on SGI IRIX 6.x MIPS systems are as follows:

Software Requirements

- IRIX versions 6.5.16f and 6.5.24f (see *Restrictions* below)
- IRIX C++ Standard Execution Environment (c++_eoe); this is needed to support TotalView and the TotalView Debugger Server.

Hardware Requirements

- Any MIPS R4000, R4400, R4600, R5000, R8000, R10000, or R12000 processor-based computer
- 103 MB of disk space
- 64 MB of physical memory and 100 MB of swap space for each TotalView session and for each 100,000-line program

Additional Requirements

Here are the compilers and environments supported by version 6.6 on an SGI IRIX 6.x system. If STLView is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	GCC 3.3.3 and 3.4.1 Silicon Graphics MIPSpro 7.3, 7.3.1.3, and 7.4
C++	GCC 3.3.3 and 3.4.1 Silicon Graphics MIPSpro 7.3, 7.3.1.3, and 7.4
FORTRAN 77	Silicon Graphics MIPSpro 7.3, 7.3.1.3, and 7.4 (see <i>Restrictions</i> below) GCC 3.3.3 and 3.4.1
Fortran 90	Silicon Graphics MIPSpro 7.3, 7.3.1.3, and 7.4 (see <i>Restrictions</i> below)
MPI	MPICH, versions 1.2.4, 1.2.5, and 1.2.6 SGI MPT, versions 1.7, 1.8, and 1.9
OpenMP C	Silicon Graphics MIPSpro 7.3, 7.3.1.3, and 7.4
OpenMP C++	Silicon Graphics MIPSpro 7.3, 7.3.1.3, and 7.4
OpenMP Fortran	Silicon Graphics MIPSpro 7.3, 7.3.1.3, and 7.4 (see <i>Restrictions</i> below)
PVM	ORNL PVM, version 3.4.4 Note: PVM support may be withdrawn in a future release.
UPC	Intrepid GCC_UPC 3.2.0.4

Restrictions

- SGI PVM is not supported.
- TotalView does not support programs that use the **sproc()** interface directly. However, TotalView does support the IRIX 6.5 **pthreads** on **sprocs** implementation. TotalView *does*, however, support debugging compiler-generated parallelism using the SGI Automatic Parallelization Option (APO) (compiler options **-pfa** and **-pca**) or SGI Parallelization Directives.
- For additional information, see **SGI IRIX Problems** within the *TotalView Release Notes*.

Sun SPARC Solaris

The software and hardware requirements for running version 6.6 on SPARC Solaris systems are as follows:

Software Requirements

- Solaris 7, 8, or 9
- Release X11R4, X11R5, or X11R6 of the X Window System

Hardware Requirements

- Any SPARC processor-based computer
- 83 MB of disk space
- 16 MB of physical memory and 50 MB of swap space (per TotalView session, per 100,000-line program)

Additional Requirements

Here are the compilers and environments supported by version 6.6 on a Sun SPARC Solaris system. If STLView is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	Forte 6 update 2 GCC 3.3.3 and 3.4.1 Sun One Studio Compiler Collection 7 and 8
C++	Apogee 4.013 Forte 6 update 2 GCC 3.3.3 and 3.4.1 Sun One Studio Compiler Collection 7 and 8
FORTRAN 77	Forte 6 update 2 GCC 3.3.3 and 3.4.1 Sun One Studio Compiler Collection 7 and 8
Fortran 90	Forte 6 update 2 Sun One Studio Compiler Collection 7 and 8
MPI	MPICH, versions 1.2.4, 1.2.5, and 1.2.6 Sun Clustertools, v 5.0
PVM	ORNL PVM, version 3.4.4 Note: PVM support may be withdrawn in a future release.

Restrictions

- If you are using the SUNpro 5.0 C++ compiler, mangling is not yet supported. (Demangling is supported.) TotalView *mangles* names when you type in certain kinds of information such as type casts in the Variable Window (for example, **vector<int>[10]**) or an overloaded function specification in the **Find function of file...** dialog box; for example, **foo(int &)**. Support for the SUNpro 5.0 C++ compiler is planned for a future TotalView release.
- The Sun WorkShop 5.0 Fortran 90 compiler does not generate debug information for Fortran 90 modules. When using this compiler, TotalView cannot display the contents of Fortran 90 modules. Sun has Bug Id 428200 to address this problem.
- For additional information see **SPARC Solaris Problems** within the *TotalView Release Notes*.

Linux Support

32-bit x86 Linux

The software and hardware requirements for running version 6.6 on Linux Intel-x86 and AMD Athlon systems are as follows:

Software Requirements

- Red Hat 7.2, 7.3, 8.0, 9.0
- Red Hat Enterprise AS 3.0 and 3 update 3
- Red Hat Fedora Core 1 and 2
- SuSE Linux Enterprise Server 8.1, 8.1 update 3, 8.2, and 9

- SuSE Personal or Professional 8.1, 8.2, 9.0, and 9.1
- See below for other Linux systems

Hardware Requirements

- Any Intel x86 or AMD Athlon processor-based computer
- 75 MB of disk space
- 32 MB of physical memory and 100 MB of swap space (for each TotalView session and for each 100,000-line program)

Additional Requirements

Here are the compilers and environments supported by version 6.6. If STL-View is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	GCC gcc 3.3.3 and 3.4.1 Intel C/C++ Compiler for Linux 7.1.015, 7.1.040, 8.0, and 8.1 PGI C/C++ 5.1-5 and 5.2-2
C++	GCC 3.3.3 and 3.4.1 Intel C/C++ Compiler for Linux 7.1.015, 7.1.040, 8.0, and 8.1 PGI C/C++ 5.1-5 and 5.2-2
FORTRAN 77	Absoft Fortran 8.2 Intel Fortran Compiler for Linux 7.1.017, 7.1.042, and 8.1 PGI 5.1-5 and 5.2-2 GCC 3.3.4 and 3.4.1
Fortran 90	Absoft Fortran 8.2 Intel Fortran Compiler for Linux (ifc) 7.1.017, 7.1.042, and 8.1 PGI 5.1.1-5 and 5.2.-2
MPI	Intel MPI 1.0 MPICH, versions 1.2.4, 1.2.5, and 1.26 LAM-MPI 7.0.6 MSTI MPI/Pro, version 1.6.4 QSW RMS, 2.8.0
OpenMP C	Intel C/C++ Compiler for Linux 8.1
OpenMP C++	Intel C/C++ Compiler for Linux 8.1
OpenMP Fortran	Intel Fortran Compiler for Linux 8.1
PVM	ORNL PVM, version 3.4.4 Note: PVM support may be withdrawn in a future release.

x86-64 Linux

The software and hardware requirements for running Version 6.6 on AMD and Intel x86-64 Linux systems are as follows:

Software Requirements

- Red Hat Enterprise Linux 3 and 3 update 3
- SuSE Personal or Professional 8.1, 8.2, 9.0, and 9.1
- SuSE Linux Enterprise Server 8.1, 8.1 update 3, 8.2, and 9

Hardware Requirements

- Any AMD Athalon64 or Opteron processor
- Any Intel em64t processor

Additional Requirements

Here are the compilers and environments supported for TotalView version 6.6. If STLView is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	GCC gcc 3.2.2, 3.3.2, and 3.4.1 PGI C/C++ 5.1-5 and 5.2-2 Pathscale EKO 1.3
C++	GCC 3.2.2, 3.3.2, and 3.4.1 PGI C/C++ 5.1-5 and 5.2-2 Pathscale EKO 1.3
FORTRAN 77	GCC 3.2.2, 3.3.2, and 3.4.1 Absoft Fortran 8.2
Fortran 90	Absoft Fortran 8.2 PGI C/C++ 5.1-5 and 5.2-2
MPI	MPICH 1.2.5 and MPICH 1.2.6 Intel MPI 1.0

HP Alpha Linux Red Hat

The software and hardware requirements for running Version 6.2.0-3 on Linux Alpha systems are as follows:

Software Requirements

- Red Hat 7.2

Hardware Requirements

- Any Alpha processor-based computer
- 368MB of disk space
- 64MB of physical memory and 100MB of swap space (for each TotalView session and for each 100,000-line program)

Additional Requirements

Here are the compilers and environments supported by Version 5.0.0-5 on a HP Alpha Linux Red Hat system.

Compiler or Environment	Product
C	GCC gcc 2.95.2, 2.96, 3.1.1, and 3.2.2 HP C for Linux Alpha 6.4.9
C++	GCC 2.95.2, 2.96, 3.1.1, and 3.2.2 HP C++ for Linux Alpha 6.3.9

Compiler or Environment	Product
FORTTRAN 77	GCC 2.95.2, 3.1.1. and 3.2.2 See <i>Restrictions</i> below for information on using these GNU compilers) GCC 2.96
Fortran 90	HP Alpha Fortran for Linux Alpha (cfal) 1.2
MPI	HP Alpha Fortran for Linux Alpha (cfal) 1.2
PVM	MPICH, versions 1.2.3, 1.2.4, and 1.2.5 ORNL PVM, version 3.4.4 Note: PVM support may be withdrawn in a future release.

Restrictions

- Debugging threaded programs (pthreads) that call **exec()** is not yet supported.
- The Visualizer is not available. You can still, however, export data using the **\$visualize** command.
- For additional information, see **Linux Problems** within the *TotalView Release Notes*.

IBM Power Linux

The software and hardware requirements for running version 6.6 on IBM Power Linux systems are as follows:

Software Requirements

SuSE Linux Enterprise Server 9

Hardware Requirements

Any IBM Pseries hardware supporting Linux

Additional Requirements

Here are the compilers and environments supported by version 6.6 on a IBM Power Linux system. If STLView is supported on a compiler, it is shown in **bold**.

Compiler or Environment	Product
C	GCC 3.3.3 and 3.4.1 VisualAge 7.0.0.0
C++	GCC 3.3.3 and 3.4.1 VisualAge 7.0.0.0
FORTTRAN 77	IBM XL Fortran 9.1.0.0 GCC 3.3.3 and 3.4.1
Fortran 90	IBM XL Fortran 9.1.0.0
MPI	MPICH 1.2.6

Restrictions

- Debugging threaded programs (pthreads) that call **exec()** is not yet supported.
- TotalView cannot obtain pointer arguments from the Lahey/Fujitsu Fortran 90 compiler.
- For additional information, see **Linux Problems** within the *TotalView Release Notes*.

Other Linux x86 Computers

TotalView is tested using Red Hat and SuSe Linux, TotalView should not fail on other Linux x86 and AMD Athlon computers.

The TotalView executable image uses the following dynamic libraries:

- libX11.so.6
- libm.so.6
- libutil.so.1
- libdl.so.2
- libc.so.6

We would be interested to hear about your experiences in using TotalView on other Linux distributions.

Other Linux Hints

If you have source code for Linux run time libraries available on your system, TotalView should be able to display this code provided that it appears in the directory from which its debug information claims that it was compiled. On Red Hat systems, this is `/usr/src/bs/BUILD`; other systems may vary. Since the source RPMs on Red Hat installs sources under `/usr/src/redhat/BUILD`, a simple symbolic link so that `/usr/src/redhat` also appears as `/usr/src/bs` is all that is required.

To work out where your library sources claim to have been compiled you should do the following:

```
objdump --stabs library_of_interest | grep S0 | head -5
```

Here's an example.

```
% objdump --stabs /lib/libc.so.6 | grep S0 | head -5
0  S0 0 0 0000000000017a10 9  /usr/src/bs/BUILD/glibc/  elf/
1  S0 0 0 0000000000017a10 0  soinit.c
96 S0 0 0 0000000000017a58 954
97 S0 0 0 0000000000017a60 2340 /usr/src/bs/BUILD/glibc/csu/
98 S0 0 0 0000000000017a60 2369 ../sysdeps/unix/sysv/linux/init-first.c
```

Here you can see that the library was compiled from `/usr/src/bs`.

Intel IA-64 Linux

The software and hardware requirements for running version 6.6 on IA-64 are described in this section.

Software Requirements

- HP Linux for Itanium (Red Hat 7.2-based)
- Red Hat IA-64 Linux 7.2
- Red Hat Enterprise AS 3.0

Hardware Requirements

- An IA-64-based processor
- 75 MB of disk space
- 32 MB of physical memory and 100 MB of swap space (for each TotalView session and for each 100,000-line program)

Additional Requirements

Here are the compilers and environments supported by version 6.6 on an Intel IA-64:

Compiler or Environment	Product
C	GCC gcc 3.3.3 and 3.4.1 Intel C/C++ Compiler for Linux 7.1.015, 7.1.040, 8.0, and 8.1
C++	GCC 3.3.3 and 3.4.1 Intel C/C++ Compiler for Linux 7.1.015, 7.1.040, and 8.1
FORTRAN 77	GCC 3.2.3 and 3.4.1 Intel Fortran Compiler for Linux 7.1.017, 7.1.042, and 8.1
Fortran 90	Intel Fortran Compiler for Linux 7.1.017, 7.1.042, and 8.1
MPI	Intel MPI 1.0 MPICH, versions 1.2.4, 1.2.5, and 1.2.6 QSW RMS, version 2.80 SGI MPT for the SGI Altix, version 1.7, 1.8, and 1.9
OpenMP C	Intel C/C++ Compiler for Linux 8.1
OpenMP C++	Intel C/C++ Compiler for Linux 8.1
OpenMP Fortran	Intel Fortran Compiler for Linux 8.1

For additional information, see **Linux Problems** within the *TotalView Release Notes*.

Index

Numerics

32-bit x86 Linux 7

H

HP Alpha Linux 9
HP Alpha Linux Red Hat 9
HP Alpha Tru64 UNIX 2
HP HP-UX for IA-64 4
HP HP-UX for PA-RISC 3

I

IBM RS/6000 Power AIX 4
Intel IA-64 Linux 11
IRIX requirements 5

L

Linux Alpha 9
Linux Support 7
Linux support 7

M

Myrinet Support 5
Myrinet support 5

O

operating systems supported 1
Other Linux x86 Computers 11
Other Linux x86 Platforms 11

P

platforms 1
platforms and versions 1

R

Red Hat Linux 9

S

SGI IRIX 6.x MIPS 5
SGI IRIX requirements 5

Solaris 6

Sun SPARC Solaris 6
supported operating systems 1

T

TotalView platforms 1

V

versions and platforms 1

X

x86-64 Linux 9

